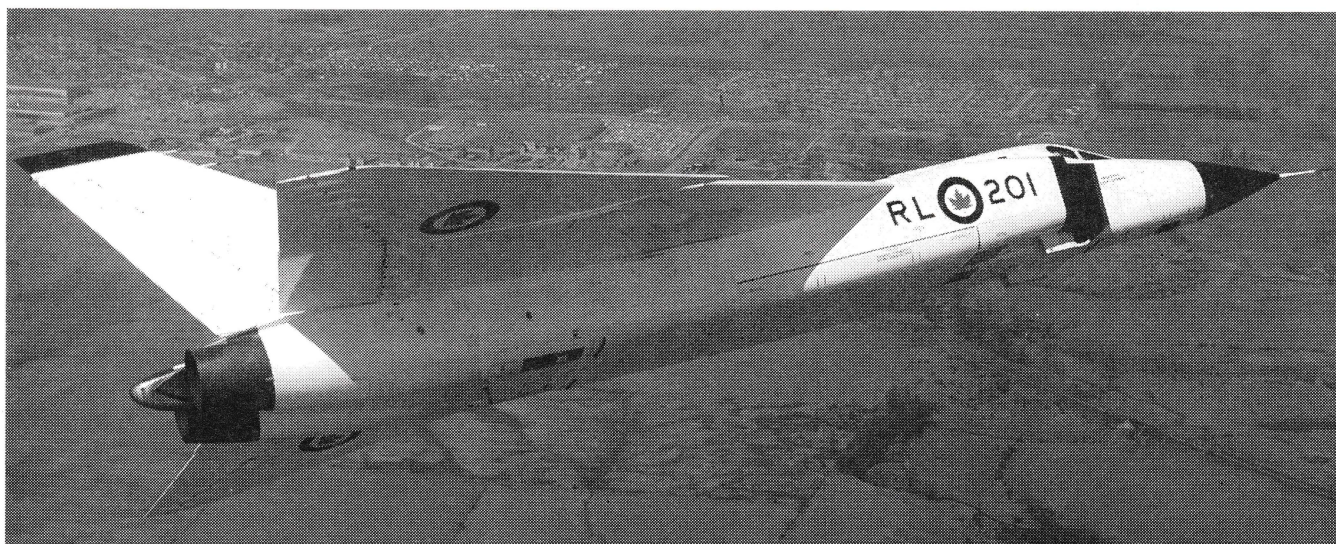


Flying Blind: The Politics of the CF-105 Avro Arrow Program

Russell Isinger



Original Arrow Promotional Photo

(Photo via Bill Zuk)

In 1921, the Italian air power theorist Giulio Douhet wrote his seminal book *The Command of the Air*. To Douhet, command of the air meant the following:

To have command of the air means to be in a position to wield offensive power so great that it defies human imagination. It means to be able to cut an enemy's army and navy off from the bases of operation and nullify their chances of winning the war. It means the complete protection of one's own country, the efficient operation of one's own army and navy, and peace of mind to live and work in safety. In short, it means to be in a position to win. To be defeated in the air, on the other hand, is finally to be defeated and to be at the mercy of the enemy, with no chance at all of defending oneself, compelled to accept whatever terms he sees fit to dictate.

Immediately following the Second World War, the concept of command of the air took on great importance in the minds of Western decision-makers due to the advent of nuclear weapons. Suddenly Canada had become, as John Foster Dulles said, "a very important piece of real estate." Canadians, situated as they were between the two superpowers, quickly realized that they no longer lived in a fire-proof house: some form of fire insurance would be necessary. But geography, once a defence plus, was now a defence minus. How to go about safeguarding North America from nuclear attack would prove to be the issue which would haunt Canada's national security establishment throughout the 1940s and 1950s. The CF-105 Avro Arrow program would be

the manifestation of Canada's brief commitment to ensuring the command of its air. But what would begin as a relatively modest venture in advanced supersonic interceptor design became, through profligacy and skyrocketing costs, one of the most expensive, complex, and controversial defence projects every undertaken in this country.

"The Arrow affair," wrote American author Melvin Conant in 1962, "has had far-reaching political repercussions and it will be a long time before the charges and countercharges about the soundness of the decision die down." Conant's words still reverberate today, and this paper is an attempt to cast further light on the Arrow program by re-examining the decisions taken during the Liberal and Conservative governments during the Arrow's short life span.

The St. Laurent Government

As political scientist Michael Tucker has written:

As a necessary element of their professionalism, the Canadian military have always sought the best weapons available, short of suggesting an independent nuclear capability. As soldiers in an alliance, they have sought the best weapons available which accord with alliance strategic theory and practice. This quest has been, since the weapons procurement imbroglios of the Diefenbaker era, a basis for the 'struggles' between the Canadian military and their political masters.

This attitude was rooted in Canada's wartime experience. Canada came of age during the Second World War and was recognized as a state with enor-

mous industrial potential and a growing sense of self-confidence. C.D. Howe, the "Minister of Everything," was then responsible for the disposal of war assets, and the Liberal government was particularly interested in maintaining Canada's aircraft industry. It was also the government's conviction that building high tech aircraft was one of the fields in which Canada could make a notable contribution to the defence of North America. In so doing, the government would structure the industry so that it could serve as an alternate source of supply for the U.S. As a result of this decision, Canada's aircraft companies would profit immensely over the next decade.

Britain's Hawker-Siddeley Aircraft had also been impressed with Canada's wartime aviation achievements. In 1945 and 1946, Howe sold Hawker-Siddeley — under very generous terms — Victory Aircraft Limited and Turbo Research Limited, both crown corporations, which would become famous as Avro Aircraft Limited, and Orenda Engines Limited. Sir Roy Dobson, A.V. Roe's British director, once told Howe that Avro's mandate was not to be a mere branch-plant operation, just manufacturing foreign aircraft under licence: Howe replied that he thought Dobson had "more guts than brains."

The company got off to a promising start with the C-102 Jetliner. However, by 1950, the Soviets had the atomic bomb and the means to deliver it and the Cold War had turned hot in Korea. In response to the perceived Soviet threat Canada embarked on its largest ever peacetime military buildup. The Jetliner, perhaps the real tragedy in the Avro story, was sacrificed on the altar of military expediency, scrapped so that Avro could concentrate on its combat aircraft design, the CF-100 Canuck.

The Canuck was born of the RCAF's frustrating wartime experience in obtaining foreign-built aircraft. Indeed, the RCAF had come to the conclusion that Canada was taking a grave risk if it became overly dependent upon external supply. The government concurred, and in 1946, Howe, determined to secure a domestic source of weaponry for the RCAF, awarded Avro a contract to design a two-seat, twin-engine, all-weather interceptor to meet the RCAF's North American and European commitments. The Canuck took flight for the first time in 1950 and accelerated production began in 1952. Despite early problems, successively improved versions of the Canuck and the Orenda engine kept Avro busy until 1958 when the 692nd Canuck rolled off the assembly line. The overall cost of the programme was \$750 million and the last Canuck retired from service in 1981. Other than fifty-three purchased under the American mutual aid program for the Belgian Air Force, no foreign sales materialized.

Production of the Canuck had barely begun when the RCAF issued specifications for an aircraft that could shoot down the next generation of Soviet supersonic bombers. At this time continental defence was becoming increasingly important to both Canada and the U.S. as both nations poured millions into the building of the Pinetree, Mid-Canada, and Distant Early Warning radar lines. Why should Canada not also build a next generation interceptor to take over the duties of the aging Canuck? After all, the Canadian economy was vibrant and could easily handle any increase in defence spending. Increased defence spending would also keep unemployment low and would prevent any drain on Canada's balance of payments which the purchase of a comparable U.S. interceptor would generate. There was also a great deference by the Cabinet to the military expertise embodied in the Chiefs of Staff Committee and a shared military-political internationalist vision that Canada needed to demonstrate that it was playing a serious role in the Western Alliance. Finally, a sense of national prestige should not be undervalued as a powerful motivating factor in Cabinet and the military at this time: as John Porter put it, "The Arrow signified a coming of age of the Canadian aircraft industry." The decision to proceed was logical, and Cabinet gave the Chiefs of Staff Committee its approval for a successor for the Canuck.

As was the case with the Canuck, an evaluation team from the RCAF, DRB, and other government agencies was dispatched to tour allied countries and, once again, they concluded that no aircraft suited to Canada's peculiar geographic needs were in existence or on the drawing boards. One should keep in mind at this point that by the early 1950s the RCAF had become the premier armed service: morale and esprit de corps were high; the Air Division in Europe, equipped with Canucks and Orenda-powered Sabres, was arguably the best air force in Europe; and, by 1955, RCAF strength had exceeded army strength. If the RCAF was expected to counter a Soviet attack, they were determined to have the best aircraft available. As James Eayrs has written, "For a force for which the sky was the environment, rather than the limit, nothing seemed impossible . . . (That) pride would lead to hubris, hubris to the (Arrow)."

Meanwhile, Howe's enthusiasm for RCAF wish lists and Avro's appetite for cost-plus government contracts waned. In 1952, Howe, now overseeing the Department of Defence Production, opposed awarding Avro the Arrow contract because he did not feel the company could handle such a program of development. In a letter to the Minister of National Defence Brooke Claxton, Howe stated that "I am frightened for the first time in my defence production experience." But the Cabinet was swayed by

the more nationalistic arguments of Claxton — a rare setback for Howe.

In 1953, the St. Laurent government awarded Avro a \$27 million contract to design two prototypes of an all-weather, two-seat, twin-engine, supersonic interceptor. The RCAF anticipated that 500-600 Arrows at a cost of \$1.5-2 million each would be needed to replace both the Canucks and Sabres in service by 1958-1959. Because of the lack of a suitable jet engine, in 1954 the PS-13 Iroquois, an engine that Orenda was pursuing as a private venture, was chosen as the power plant.

Although the Arrow was occasionally alluded to in the House during this period by Claxton and other ministers, the program led a dim, subterranean existence prior to 1954. But the explosion of a Soviet hydrogen bomb and the spectre of a “bomber gap” between the West and the Soviets led to an acceleration in its development.

Avro was awarded a revised \$260 million contract for five Arrow I aircraft powered by Pratt and Whitney J-75 to be followed by thirty-five Arrow II fitted with the as yet unavailable Iroquois. The government also approved Avro's decision to eliminate the time-consuming process of producing a custom-built prototype, exhaustively testing it, and then setting up an assembly line. Instead, Avro undertook thorough preliminary research on both mock-ups and wind tunnel and free flight test models. Both the prototypes and pre-production aircraft were then to come directly off an already established assembly line. It was felt that any increase in initial costs would be more than offset by later savings in time and labour which would reduce overall costs. The danger inherent in this procedure, however, is that it assumes production.

Thus the Arrow program was gaining considerable momentum by the time Howe announced its existence to the House in March 1955, although he did not inspire confidence when he stated that “I can now say that we have embarked on a programme of development that frankly gives me the shudders,” a frank admission for a minister who had once promised the armed forces gold-plated pianos if they wanted them. But Howe had good reason to be nervous. As Paul Hellyer, later defence minister in the Pearson government, has written, “Of all the decisions facing a minister of defence, few are as fraught with political danger as the choice of a new tactical aircraft.”

And the Arrow program was already proving to be trouble-plagued. In 1954, scientific advisors at two Canadian aeronautical research agencies, the NRC and the NAE, disputed Avro's performance calculations; Avro was only vindicated after a third-party evaluation by a U.S. laboratory, NACA, but the program was delayed in the meantime. Avro then informed the government that it would need an additional \$59 million to keep the project on schedule.

In 1955 and thereafter, retiring Army Generals Guy Simonds, Harry Crerar, and Wilfred Macklin began loudly proclaiming the missiles would render the Arrow obsolete by the time it entered service. This attitude reflected a debate which was raging in most of the militaries in the West. The generals also claimed that:

The combined vested interests of the air force, the aircraft industry and defence research scientists, burning with zeal to participate in a project they could call their own, coupled with the known desire of ministers to maintain a defence effort



Original RL-201 roll-out in Malton, Ontario October 4, 1957.

(Photo via Keith Olson)

with a strict manpower ceiling, swept aside any opposition to this venture.

Meanwhile, during 1955 the consensus on the procurement of the Arrow within the St. Laurent government and the Chiefs of Staff Committee was beginning to break down as the cost of the program rose. Per unit costs for the Arrow had almost doubled, and no one seemed entirely certain when the Arrow would enter service or, due to the lack of comprehensive accounting system, what the overall cost of the program would be. Shockingly, it would be October 1957, before the RCAF would set up a special project office to monitor and coordinate the development of the Arrow. As the head of the project office, Group Captain Ray Footit would later state:

Until they set up the Arrow weapon system office, costing was done by somebody in somebody else's place, equipment was purchased someplace else, contracts were let separately . . . these things were all being done by all kinds of people in the government, it was never coordinated . . . Now, one lesson that came out of the Second World War was that you had to have project management. Project management is now something everybody knows and everybody does but within the Air Force in the early days it was parcelled out in different directorates and with different people doing different things.

In June 1955, the government decided to review the Arrow program every six months and ordered that development be slowed down until test flights proved its airworthiness. In November 1955, Minister of Defence Ralph Campney was dispatched to meet with the U.S. Secretary of the Air Force to ascertain if the U.S. would be interested in purchasing the Arrow. This is somewhat ironic as Cabinet documents clearly indicate that the Liberals had always known and accepted that international sales were unlikely. Both the U.S. and Britain had evaluated the Arrow and, though they offered their encouragement of and admiration for the project, neither appeared interested in actually purchasing the aircraft. Unfortunately, praise for the program by USAF and RAF officials seems to have been erroneously interpreted by some at Avro and in the RCAF as tantamount to a commitment to eventually buy the aircraft.

In December 1955, the government limited Avro to eleven aircraft and put a spending cap on the program of \$170 million over the next three years. A warning was also issued to Avro that the project could be halted or abandoned at any stage if this was found to be expedient or necessary. Despite all of these warning signs and with its future precariously staked on a single military contract, the company was prospering under the presidency of Howe's

former Deputy Minister, Crawford Gordon. The parent corporation had become the third largest corporation in Canada, a diversified industrial giant of nearly forty companies and directly employing over 41,000 people.

The project suffered the blow that would prove fatal in 1956. Over Avro's strenuous objections, the RCAF and their allies in Defence Production determined that existing — ie. cheaper — off-the-shelf equipment did not meet their high standards. When the American Hughes Aircraft Company balked at developing the radar fire-control system for the Arrow, the RCAF and Defence Production opted to go it alone, funding the development of the exceedingly ambitious ASTRA I. And, in the wake of the cancellation of the Defence Research Board's VELVET GLOVE missile program, the RCAF and Defence Production snapped up the SPARROW II, a cancelled U.S. Navy air-to-air missile. These decisions to expand the program from one to four systems made the Arrow's cancellation almost inevitable.

While the RCAF was insisting on, as Dam Middlemiss has described it, “. . . an all-singing, all-dancing, gold-plated fighter,” they had, by 1957, determined that the aircraft would be too complicated for reserve squadrons to operate. It therefore reduced the production run from 500-600 to 200-300. By 1957, the government, on the advice of the Treasury Board, once again ordered the program stretched out, limiting the project to eight aircraft at a total cost of \$216 million. Squadron deployment was now not expected until 1961-1962.

All documentary evidence indicates that by 1957 the Liberals had had enough and were preparing to cancel the aircraft and substitute a cheaper American interceptor. Whispers of cancellation had dogged the Arrow for years and the Chiefs of Staff were prepared to go along with it. However, it would have been political poison to do this in election year. Had the Liberals triumphed in the election, the Arrow project would have been killed. Of course, they did not win. Canadians went to the polls in June 1957, and to everyone's surprise, the 22-year Liberal dynasty was shattered. A Conservative minority government was formed, and John Diefenbaker became Prime Minister.

The Diefenbaker Government

Diefenbaker and his Minister of National Defence, Major-General George Pearkes, VC, inherited three defence problems from the Liberals — the North American Air Defence Agreement, and the NATO request to re-equip the RCAF Air Division in Europe for the nuclear strike-reconnaissance role, and the Arrow programme. Shortly after the election, solely on the advice of Pearkes and the Chiefs of Staff Committee and without consulting Cabinet or a stunned External Affairs, Diefenbaker signed the

NORAD agreement. As the Chairman of the Chiefs of Staff Committee, Lieutenant-General Charles Foulkes later remarked, “. . . I am afraid that we stampeded the incoming government.” Canada was now formally committed to continental air defence and supranational integration with the USAF. A storm of criticism ensued in the House, which only fed the partisan Diefenbaker’s wariness of anyone who had served the previous government. Counted amongst those not to be entirely trusted was the top brass of the military and the top management at Avro whose ranks included ex-RCAF officers like Air Marshal Wilf Curtis and Air Vice-Marshal John Plant. These feelings of mistrust appeared to be mutual.

If the Liberals had been frightened by the consequences of cancelling the Arrow before an election, the Conservative minority government recoiled from the prospect of cancelling it while facing a budget deficit during a period of economic recession and rising inflation. The great boom of the 1950s had gone bust, and the Conservatives were simply not prepared to act as the Liberals did when they cancelled the EH101 helicopter contract in 1993. Diefenbaker, a man who weighed every decision against domestic political considerations, could not swallow such a bitter pill just yet.

So, for political rather than military reasons, the cautious and inexperienced Diefenbaker government accepted the Chiefs of Staff Committee’s equally reluctant recommendation to continue the program. Avro was given the go-ahead to continue development of the Arrow on a restricted basis at a cost of \$172 million for one year whereupon Avro was warned that the entire project would be reviewed. Avro saw what it wanted to see and concluded that the program had been reprieved.

In October 1957, the first prototype rolled out of its hangar. However, on the same day the Soviet Union launched into orbit *Sputnik*, shocking a complacent West and, symbolically, driving the Arrow from the headlines. Almost overnight, fears of a “bomber gap” between the West and the East were replaced with fears of a “missile gap.” On March, 1958, the Arrow flew for the first time, proving its airworthiness. Six days later voters returned the

Diefenbaker government to office with the largest electoral mandate in Canadian history.

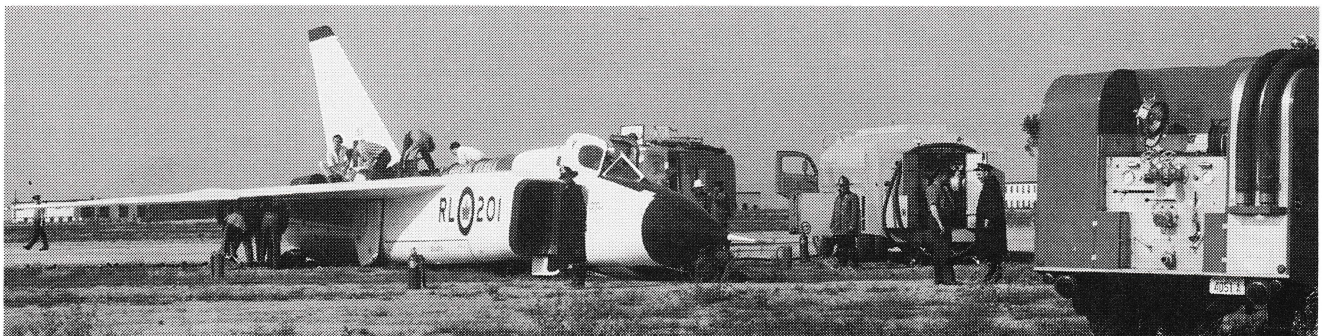
By 1957 the RCAF had once again halved its requirement to 100-150 planes, and costs were spiralling. Defence Production estimated in 1958 that \$300 million had already been spent and that a further \$871 million would be needed to complete the project at a per unit cost of about \$12 million. For a government elected on the promise of decreased government expenditures and lower taxes these figures were horrifying.

Not surprisingly, in the face of decreasing shares of a diminishing defence budget, the shaky military consensus also vanished and interservice rivalry began to intensify as the Chiefs of Staff Committee realized that if the Arrow programme went ahead as recommended there would be no money to replace aging navy frigates or for acquiring armoured vehicles and tactical nuclear missiles for the army. Remember, the RCAF was receiving 50 percent of the defence budget during this time period.

What is not well-known is that intraservice rivalry had also arisen. The RCAF also needed to re-equip its European squadrons for accepted nuclear strike-reconnaissance role — a role which the Arrow could not be adapted to — and wanted to procure surface-to-air missiles as well. Air Marshal Hugh Campbell, the Chief of the Air Staff, who previously only had to worry about resistance from the Army and Navy chiefs now faced a growing rift between the NORAD and NATO officers within his own service.

Furthermore, with the dawn of the missile age the strategic rationale behind Western defence policy shifted from an emphasis on defence to deterrence. U.S., British, and Canadian intelligence forecasts now began to indicate that by 1961 the principal Soviet threat to North America would come from intercontinental ballistic missiles, not bombers.

Throughout 1958 the Chiefs of Staff Committee struggled to come up with alternatives which would see the Arrow produced and the other services’ requirements satisfied. This proved to be an attempt to square a circle, and the Chiefs of Staff Committee decided that it preferred that all the services get something instead of only the RCAF getting the Ar-



RL201 crash scene June 14, 1958.

(Federal newsphoto via Bill Zuk)

row. The costs simply outweighed the benefits. In August 1958, the Chiefs of Staff Committee advised the Diefenbaker government that they had come to the conclusion that there were really only two feasible courses of action left. One was to complete the Arrow production run at a staggering cost. The alternative was to cancel the Arrow and to buy from the U.S. two relatively cheap Bomarc-B nuclear-armed surface-to-air missile installations, its complementary Semi-Automatic Ground Environment (SAGE) command and control system, and 100 U.S. built interceptors. U.S. aircraft, built as they were in large production runs, were available at a cost of about \$2 million each.

Despite the fact that embarrassing questions were beginning to be directed toward the government from the Opposition both in the House and on committee, the government still waffled. In September 1958, Diefenbaker announced that all defence requirements were to be revised because of the diminished Soviet bomber threat. The two Bomarc bases would be built in Ontario and Quebec, SAGE would be purchased, and the ASTRA I and SPARROW II programmes were cancelled. But because of the economic recession and a serious unemployment problem in the Toronto area, a decision as to what interceptor to procure was to be postponed for yet another six months. This has to rank as one of the most costly unemployment relief measures in Canadian history, and may have been due in part to the lobbying efforts of Toronto-area Conservative MPs, and A.V. Roe's Tory shareholders. Ontario's Conservative Premier Leslie Frost, whose provincial organization helped Diefenbaker get his majority in 1958, also weighed into the debate, expressing his concern about the impact of cancellation on the Malton region.

By 1959, five Arrows had flown and the Iroquois-engined prototype was being readied for its expected world speed record-breaking first flight. Avro had also managed to increase the range of the Arrow and reduce its overall cost to \$7.8 million each by redesigning it to accommodate an existing Hughes MA-1 fire-control system and the Falcon missile. However, neither the RCAF nor the Cabinet were confident in Avro's ability to lower costs.

Though there was no doubt that the Arrow was state-of-the-art, Avro was forced to fight a rear-guard action against critics in and out of government who kept proclaiming that the missile had rendered the manned aircraft obsolete. Avro was not helped in this battle by the fact that Duncan Sandys, the British Defence Minister, had released a White Paper which supported this view. Britain and the United States were cancelling aircraft programs, and their aircraft companies were rapidly shifting resources into missiles, a situation that economists term "creative destruction," or the process of be-

coming unexpectedly obsolete through the creation of new technology. In 1957 the USAF went so far as to announce that "... as readily as missiles become operationally suitable, they will be placed into units either to completely or partially substitute for manned aircraft accordingly to military requirements." Of course, a factor that was always in the mind of the Canadian government was that when Britain and the United States cancelled aircraft, they did not at the same time wipe out whole industries.

Meanwhile, Pearkes, no fan of the Arrow while in Opposition, made another eleventh hour attempt to sell the Arrow to Britain and the U.S. — and failed. In fact, Pearkes was distressed to find out that Britain was rather desperate to sell Canada its own ill-fated TSR-2 aircraft. The fact of the matter is that when the St. Laurent and Diefenbaker governments tried to sell aircraft to the Americans and British, they came up against the same logic that had led Canada to develop its own aircraft industry in the first place: the Americans and the British had their own defence criteria and their own aircraft industries to worry about. There is no convincing evidence that the U.S. conspired to pressure Canada to cancel the Arrow in favour of one of its own equipment. The simple truth was that if Canada wanted to have the Arrow, Canada would have to pay for it.

By 1959 the six month extension was coming to an end, and the Cabinet finally had to make a decision. Many cabinet ministers would later characterize it as the most difficult decision they would ever have to take, and some would also claim that it led to Diefenbaker's pathological hatred of making hard decisions. At least one minister argued to Cabinet that "... if the Arrow is scrapped we might as well take the name off the country." Cabinet documents clearly indicate that the government agonized over the effect such a decision would have on the aircraft industry and on Canada's sense of achievement and sovereignty, but such nationalistic viewpoints were in the minority. R.B. Bryce, the Clerk of the Privy Council and the most important civil service mandarin during the Diefenbaker years, described the Cabinet debates as "frustrated, not heated, but not entirely calm," but in general the Cabinet was of one mind on the need to cancel.

On February 20, 1959, Diefenbaker announced to the House that the Arrow and Iroquois programmes were terminated. Cancellation charges brought the total costs of the programmes to \$470 million. In the furor the Opposition vilified the Diefenbaker government on how the decision was executed, rather than the decision itself. Editorial and popular opinion appeared to be split, with Diefenbaker's mail before and after the decision running two-to-one in favour of cancellation. Privately, in a letter to Opposition Leader Lester Pearson,

C.D. Howe admitted that the Liberals would have done same thing, only more decisively. But Diefenbaker could console himself with the fact that the further you got from Toronto, the more muted the criticism became.

The Chiefs of Staff Committee were relieved that the Diefenbaker government had taken the decision, but was disturbed by Diefenbaker's reliance on military rather than economic arguments to justify the cancellation, a coupling the military had specifically opposed. Unlike the United States, where weapons procurement is done on the basis of strategic considerations, in Canada it is usually done on the basis of economic considerations. In the RCAF's opinion, though the bomber threat had diminished substantially, it still existed and represented a threat which had to be met by interceptors as well as missiles. Thus the RCAF and the Chiefs of Staff Committee were ill at ease that Diefenbaker's speech contained only a vague promise of replacement interceptors. This disingenuousness on the part of the government no doubt stemmed from a desire to associate the military with the decision.

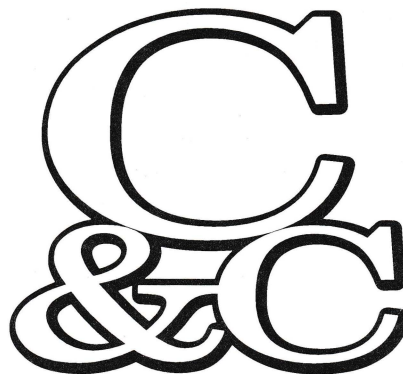
As for Avro and Orenda, they were ruined. They had done little to prepare for this contingency, and in fact had not helped themselves by frantically lobbying the Diefenbaker government. Rather foolishly, they had hired the advertising firm of Cockfield Brown, the Liberals' advertising firm, to do the lobbying. This fact did not go unnoticed by the Diefenbaker. But in Avro's defence, there was probably little they could have done, given that they had become so heavily dependent on one government contract. As Diefenbaker noted, "The company seemed horror-struck at ever having to compete in a normal marketplace situation." Gordon and other management personnel resigned, and over 14,000 were laid off on "Black Friday," many leaving for jobs with British or U.S. companies or agencies. But, due to the parent company's strategy of corporate diversification, A.V. Roe Canada Limited survived. In 1962 the company was renamed Hawker-Siddeley Canada Limited, the name under which it still operates.

As well, due to the Diefenbaker government's Defence Production Sharing Agreement concluded in 1958, Canada's aerospace sector actually did more business in the five years following the Arrow's cancellation than in the previous five years. Heavily influenced by its involvement with the Arrow project, Defence Production had gradually abandoned the idea of defence self-sufficiency, accepted the reality of procurement reliance on the U.S., and decided to profit from it through guaranteed access. In a manner analogous to the Auto Pact, Canada traded its domestic design capability for a big piece of a bigger defence pie. In the end, Canadian defence needs were satisfied with less expensive American

aircraft, and Canadian defence industrial needs were met by the Defence Production Sharing Agreement. Defence, like foreign policy, turned out to be the art of the possible.

No incident in the history of Canadian defence policy has produced such vitriol, emotion, prejudice, finger-pointing, and invective as the Arrow affair. In most renderings of history, Diefenbaker is the sole villain, and the St. Laurent government by and large escapes unscathed. When blame is apportioned, responsibility for the flawed policy process which led to the Arrow cancellation is invariably laid squarely at the feet of the Diefenbaker government. This is neither a fair nor objective assessment of the historical record. We have to remember to be historians, not merely experts made clever by hindsight, and place events into context. In the final analysis, Diefenbaker made the right decision in the wrong manner, whereas the St. Laurent government made the wrong decisions for the right reasons. But Diefenbaker himself appears to have understood that he would bear the burden of history when he later stated:

The responsibility finally rests on the Prime Minister. No one else. He takes the best advice he can get. But decision on all vital matters must finally receive his approval . . . when things turn out badly 'the old man,' they said, 'was always responsible.'



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As for the Chiefs of Staff Committee and the RCAF, the real culprits in this tale, just as Foulkes and the Chiefs had feared, it was 1961 before the RCAF received sixty-six U.S.-built CF-101B Voodoos, an interceptor which had previously been rejected by the RCAF in 1953. To Diefenbaker, purchase of a U.S. interceptor soon after cancellation was not politically acceptable. The government went on to infuriate the Kennedy administration by refusing to honour its commitment to accept nuclear warheads for the weapons, thereby rendering hundreds of millions of dollars worth of other weapons-systems virtually useless. In 1963, the Diefenbaker government fell after a non-confidence vote condemning its conduct of Canada's foreign and defence policy. In the final analysis, the Arrow had proved to be the first link in a chain of events which

destroyed the government.

The existing Arrows were offered to Canadian, U.S. and British aeronautical agencies for research purposes, but they were rejected because it was simply too expensive to keep such a small number of aircraft flying. The six prototypes and the thirty-seven nearly complete pre-production aircraft were then unceremoniously stripped of all classified material and scrapped by Crown Assets Disposal, though not out of Diefenbaker's vindictiveness as has been claimed. Canada's brief and unrealistic experiment with air defence self-sufficiency had come to an end, and the Arrow, as much a victim of bad timing as poor decision-making, passed into legend where it will probably soldier on far longer than if it had entered service.

The Avro Arrow Story

Bill Zuk



RL-204 and Avro CF-100, December 13, 1958. Note how closely this was duplicated at WCAM.

(Federal newsphoto via Bill Zuk)

When Avro Canada was finally able to showcase their remarkable new interceptor, the Honourable George Pearkes, Minister of National Defence, announced "I now have the pleasure of unveiling the Avro Arrow, Canada's first supersonic aircraft, a symbol of a new era for Canada in the air."

This was merely the official ceremony, as for most knowledgeable observers of Canadian military aviation, the CF-105 Avro Arrow had already been an object of much attention. Avro Arrow RL-201 was the first of a planned series of 100 aircraft. Construction of "201" would take only 28 months from the release of the first blueprints to its roll-out, but the story of the Arrow had begun much earlier.

Designed to RCAF specifications in 1953 that

called for a twin-engine, two seat interceptor capable of protecting the Arctic frontier of Canada, the Avro Arrow was remarkable in its execution. Unlike its subsonic predecessor, the CF-100 Canuck, the Arrow represented an advanced technological achievement. Developed by A.V. Roe of Canada, its origins stem from the innovative research and design programs carried out by the company in the 1940s.

The Avro CF-105 Arrow was one of the world's most advanced fighter aircraft during the 1950s. The developed Arrow Mk. II powered by Canadian-designed Iroquois engines would have been capable of Mach 2.4 speeds—remarkable for 1959! An innovative approach was also undertaken by the Avro